

The Hack Reactor syllabus, above all else, fosters software engineers ready to succeed in today's tech industry.

Our syllabus does this in the context of learning full stack JavaScript through pair programming and then developing several full stack applications in teams. Our syllabus is living and evolving. We constantly improve on it based on the ever changing needs of the technology industry, and feedback from our students and alumni.

Future programs may differ in small or big ways from this document

The Pre-Course

Getting Prepared

By completing the pre-course work, you will have a strong foundation, and be able to begin the Hack Reactor learning experience.

JavaScript

- Recursive Functions
- Higher Order Functions

HTML, CSS, and JQuery

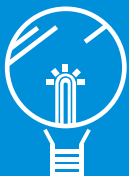
- The foundations of web development
- Build an interactive chat site

The Modern web dev work environment

- Github
- The command line

12-Week Immersive: Creating world class software engineers

During the 12-week immersive, you'll be primarily working in pairs and groups over 2-day sprints, putting in 11-hour days at a minimum, 6 days a week. Our instructional content gives you just enough scaffolding so you can get to the real work of solving coding problems in the context of actual applications.



Week 1:

CS and Software Engineering Fundamentals - Lay the Foundation

In the first week, you'll be immersed in learning the fundamental concepts and strategies that make one a competent software engineer.

Mental Skills

- Thinking like an engineer
- What it means to write good code

Communication Skills

- Precise technical communication
- Empathetic communication in teams

Writing Data Structures

- Basics and advanced structures
- Using JS instantiation patterns



Weeks 2-5:

Full Stack JavaScript - What it takes to build real web apps

Learn Full Stack JavaScript in 4 weeks in the context of working on realistic code bases

Mastering JavaScript

- ES5
- ES6
- Asynchronous Patterns
- Promises

Client Side Concepts and Technologies

- MVC
- AJAX

Server Side Concepts and Technologies

- npm
- NodeJS
- ExpressJS
- Authentication

Deployment Concepts and Technologies

- DigitalOcean
- Heroku

Database Concepts and Technologies

- SQL
- MongoDB
- ORMs
- Redis



Weeks 6-12:

Application Design and Development - Build incredible applications

Work in teams to develop real working applications. Work with new applications, test new technologies, and put your bug testing to good use.

Work on several projects

- Building application from scratch
- Working on legacy codebases
- Using new languages

Adapt your coding

- Using new technologies
- Testing
- Continuous Development

Advanced Team Dynamics

- Agile Workflow
- Iterative development
- Advanced git techniques



Job Search

At Hack Reactor, you are constantly developing your professional persona as a Software Engineer. In week 12, we heavily emphasize developing and continuing to improve the skills you need to be successful in your job search.

Job Search Prep

- Developing an effective study plan
- Developing a robust daily schedule

Materials Review

- Resume and Cover letter tear down
- Creating your online presence (LinkedIn, AngelList)

Applications and negotiations

- Choosing the right companies
- Understanding the application lifecycle
- Presenting your best self
- Advice and guidance based on available opportunities



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